The Crystal Ball Project: Telehealth Technology in 3-5 Years

August 17, 2023
Webinar Tips and Notes

- Your phone &/or computer microphone has been muted.
- If we do not reach your question, please contact your regional TRC. There may be delays in response time: https://telehealthresourcecenter.org/contact-us/
- Please fill out the post-webinar survey.
- Closed Captioning is available.
- Please submit your questions using the Q&A function.
- The webinar is being recorded.
- Recordings will be posted to our YouTube Channel: https://www.youtube.com/c/nctrc
The Crystal Ball Project: Telehealth Technology in 3-5 Years

Presented for
National Consortium of Telehealth Resource Centers
Webinar Series
August 17th, 2023

Jordan Berg
Principle Investigator
Telehealth Technology Assessment Center
jjberg@anthc.org
Who is TTAC?

• TTAC is federally funded resource center made available through the Office for the Advancement of Telehealth (OAT)

• TTAC provides Technology Assessment services to the 12 regional TRCs as well as the other national TRC.
National Consortium of Telehealth Resource Centers

Our website hosts many resources. If you can’t find what you’re looking for, contact your regional TRC:

www.TelehealthResourceCenter.org
What does TTAC do?

“A particular set of skills…”
Overview

• Crystal Ball Project Overview
  – Objective
  – Structure
  – Deliverables
  – Limitations and Disclaimers

• Six Future Technology Areas
  – AI, Machine Learning
  – Expanded Telehealth Application
  – Apps, Solution Platforms
  – Virtual and Augmented Reality
  – Drones
  – Robotics
  – Hearables

• Conclusion
“Examine digital healthcare technologies and applications that will have the most impact in the next three to five years and provide credible vision and examples of near-term advancements in Health related technology.”
Crystal Ball Workgroup Structure

• Bi-Monthly virtual meetings
  – Identify Key Tech Areas
    • Define Key Attributes
    • Compare Current State vs Future State
    • Identify Potential Applications
    • Identify Potential Challenges
    • Key Considerations
  – Guest presentations

• Crystal Ball Toolkit Document
• **Project Deliverables**
  – Toolkit
    • Telehealthtechnology.org
  – Webinar Series- TBD

• **Disclaimers and Limitations**
  – The contents of this document represent the thoughts and
    opinions of the authors. It does not necessarily represent the
    thoughts and opinions of the Office for the Advancement of
    Telehealth (OAT), the National Telehealth Technology
    Assessment Center (TTAC) or the Alaska Native Tribal Health
    Consortium (ANTHC).
  – Vendors referenced are for illustration purposes and do not
    indicate an endorsement of any particular technology, service
    or product.
Future Technology Areas

Six Future Technology Areas

- AI, Machine Learning
- Expanded Telehealth Application
- Apps, Solution Platforms
- Virtual and Augmented Reality
- Drones
- Robotics
- Hearables
Potential Applications

• Personalized and Targeted Medicine
• Differential Diagnosis and Treatment Planning
• Workflow and Revenue Cycle Optimization
• Image and Text Analysis
• Potential for New and Original Concepts
Key Considerations

• Quality and Size of data sets
• Bias in data sets
• The “Black Box” problem
• Impact on Jobs and Workflows

Using AI to Support Healthcare Amid a Mental Health Provider Shortage

AI tools cannot replace mental health providers, but they may be able to help close gaps and address dips in care quality by supporting the existing workforce.

https://healthitanalytics.com/features/using-ai-to-support-healthcare-amid-a-mental-health-provider-shortage#:
Growth in Telemedicine and Home Monitoring

- Increase in quantity and relevance of patient generated data
- Key tool to address access and equity issues
- Primary Care to adopt more “Virtual First”
- Increase in On-Demand models

Access to increase for every small hospitals

- Tele-ICU
- Tele-Stroke
- Tele-Mental Health in ED

Hospital to Home
Solutions and Platforms

APPS
• Decision Support Tools for Providers
• Chatbots

EHR Integration
• Automation for Admin Functions
  – Check In
  – Vitals Collection
  – Coding and Billing

Bioware and Biosensors
• Remote Monitoring
• Critical Care Management
• Wearables
• AI enabled monitoring
Drones

• Consumer Product Deliveries
  • US Military
    – Casualty Transport
    – Logistics
    – Emergency Supplies
  • Non-US
    – AED Drones
    – Blood/Plasma
• Regulatory Concerns and Delay

https://www.wired.com/story/drones-have-transformed-blood-delivery-in-rwanda/
Robotics

• Prosthetics
• Physical Therapy
• Surgical
• Assistive/Home
  – Companion
  – Theraputic
• 3D Printing
• Nursing Home and Skilled Nursing Facilities

https://ptr.blue-ocean-robotics.com/
Hearables

• OTC hearing aid
• Better access to screening and customization tools
• Mobile “smart” integration
• Bio-Sensing tools
  – Heart Rate
  – Temp
  – Movement
  – Blood Pressure

Historic Barriers:
• Cost
• Purchase Complexity
• User Stigma
Conclusion

• Technologies in rapid and fundamental change
• Better outcomes at reduced costs
• AI as an underpinning technology supported by:
  – Growing datasets
  – Improved functionality

• Real and serious concerns
  – Technology vs regulation vs policy
  – Broadband accessibility
  – Digital literacy
  – Security and privacy concerns
Have Questions???

1. www.telehealthtechnology.org

2. Ask us your technology questions.
Thank You

Contact Us:
www.telehealthtechnology.org
1-844-242-0075
Our Next Webinar

The NCTRC Webinar Series

Occurs 3rd Thursday of every month.

**Telehealth Topic:** Virtually Forgotten: Rural West Texas Telehealth Challenges And Opportunities

**Hosting TRC:** TexLa Telehealth Resource Center (TexLa TRC)

**Date:** September 21, 2023

**Times:** 11 AM – 12 PM (PT)

*Please check the NCTRC website for more information on the upcoming webinar.*
Please Complete Our Survey

Your opinion of this webinar is valuable to us.

Please participate in this brief perception survey (will also open after webinar):

https://www.surveymonkey.com/r/XK7R72F